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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,691	03/03/2004	Sung Chun Choi	RPL-0030	2587

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EXAMINER

ROY, SIKHA

ART UNIT PAPER NUMBER

2879

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,691

Applicant(s)

CHOI ET AL.

Examiner

Sikha Roy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 13-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I claims 1-12 in the reply filed on January 25, 2006 is acknowledged. The traversal is on the ground(s) that there is not a serious burden on the Examiner. This is not found persuasive because the inventions for the two groups (Group I claims 1- 12 for plasma display panel, Group II claims 13-62 for driving plasma display) are independent and distinct and examination of the two groups would require divergent searches as evidenced by their different classification.

The requirement is still deemed proper and is therefore made FINAL.

Claims 13-62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II, there being no allowable generic or linking claim.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

Figures 1-5b should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

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any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Page 22 paragraph [75] line 8, 'lower substrate 117' should be replaced by – lower substrate 118--.

Appropriate correction is required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

Claim 12 is objected to because of the following informalities:

Claim 12 line 2, '300 or more' should be replaced by -- 300 μ m or more--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,789,862 to Makino.

Regarding claim 1 Makino discloses (Fig. 1, 5A column 3 lines 9-36, column 5 lines 41-50) a plasma display panel comprising a scan electrode 3 and a sustain electrode (common electrode) 4 which are formed on an upper substrate 1 in parallel to each other, an address electrode (data electrode 10 on a lower substrate 2 in the direction where the address electrode intersects the scan and sustain electrode, the distance between the scan and sustain electrode (discharge electrode gap) d is set wider ($d = 2.0 h$) than the distance between the scan electrode and the address electrode (opposing discharge gap) h .

Regarding claim 11 Makino discloses in Fig. 1 the distance between the sustain electrode 4 and address electrode 10 is set the same as that between the scan electrode 3 and address electrode 10.

Regarding claim 12 Makino discloses (column 5 lines 41-45, column 6 lines 53,54) the opposing discharge gap is conventionally $150 \mu\text{m}$ and the distance d between the scan and sustain electrode is set to be $2h = 300 \mu\text{m}$.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,789,862 to Makino as applied to claim 1 above, and further in view of U.S. Patent 6,720,736 to Lee et al.

Regarding claim 2 Makino is silent about an auxiliary electrode formed on the address electrode in a portion where the scan and sustain electrodes intersect the address electrode.

Lee in analogous art of plasma display panel discloses (Fig. 7 column 4 lines 12-31 column 6 line 63 through column 7 line 3) discloses auxiliary electrodes 62Xa formed on the address electrode 62X in a portion where the scan and sustain electrodes (62Xa perpendicularly overlaps trigger electrode playing role of scanning electrode) intersect the address electrode. Lee further teaches this configuration of plasma display panel is capable of improving its discharge efficiency and brightness.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include the auxiliary electrode formed on the address electrode of Makino at the portion of intersection of sustain and scan electrodes with address electrode as taught by Lee for improving the discharge efficiency and brightness of the display panel.

Regarding claim 3 Lee discloses the auxiliary electrode is extended in a direction parallel to the scan electrode and sustain electrode at the intersecting portion.

Regarding claim 4 it is clearly evident from Fig. 8 that the auxiliary electrode 62Xa has width wider than the scan and sustain electrode (trigger electrode acting as scanning electrode).

Regarding claim 5 Makino and Lee disclose the claimed invention except for the width of the auxiliary electrode being same as that of the scan and sustain electrodes. It would have been obvious matter of design choice to set the width of the auxiliary electrode same as that of the scan and sustain electrodes since the applicant has not disclosed that this configuration solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the width of the auxiliary electrode being wider than that of the scan and sustain electrodes.

Regarding claim 6 Makino and Lee disclose the claimed invention except for the width of the auxiliary electrode being narrower than that of the scan and sustain electrodes. It would have been obvious matter of design choice to set the width of the auxiliary electrode narrower than that of the scan and sustain electrodes since the applicant has not disclosed that this configuration solves any stated problem or is for any particular purpose.

Regarding claims 7 and 8 Lee discloses the auxiliary electrode is extended in both directions (including one direction) parallel to the scan and sustain electrodes at the intersecting portion.

Regarding claims 9 and 10 Lee discloses the auxiliary electrode is extended parallel to the scan electrode and the sustain electrode at a portion where the auxiliary electrode intersects the scan and sustain electrodes respectively.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,984,936 to Chien et al. discloses plasma panel with auxiliary electrode formed on the address electrodes.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sikha Roy

Sikha Roy
Patent Examiner
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